SALEM COUNTY

Cancer Control and Prevention Capacity and Needs Assessment Report Summary

December 2004

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Notices:

Medicine is an ever-changing science. As new research and data broaden our knowledge, conclusions may change. The authors and reviewers have endeavored to check the sources of information and to utilize sources believed to be the most reliable in an effort to provide information that is as complete as possible at the time of submission and generally in accord with appropriate standards. However, in view of the possibility of human error or changes in medical science, this work cannot be warranted as being complete and accurate in every respect. Readers are encouraged to confirm the information contained herein with other sources. Information concerning some of the sources of data, rationale for its utilization, acknowledgements of specific parties contributing to these efforts, as well as links to cancer-related information may be found at www.umdnj.edu/evalcweb/.

This county-level Report Summary summarizes the larger county report, which is a baseline evaluation of this county, performed as part of the Capacity and Needs Assessment initiative of the New Jersey Comprehensive Cancer Control Plan (www.state.nj.us/health/ccp/ccc_plan.htm), under the direction of the New Jersey Department of Health and Senior Services (NJDHSS) Office of Cancer Control and Prevention (OCCP) (www.state.nj.us/health/ccp/), the University of Medicine and Dentistry of New Jersey (UMDNJ) (www.umdnj.edu/evalcweb/), and the Evaluation Committee of the Governor's Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey (Task Force Chair: Arnold Baskies, MD; Evaluation Committee Chair: Stanley H. Weiss, MD).

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Salem County Cancer Capacity and Needs Assessment Report Summary

Introduction

The Office of Cancer Control and Prevention (OCCP) of the New Jersey Department of Health and Senior Services (NJDHSS), in conjunction with the mandate from the Governor's Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey (Task Force), is developing comprehensive capacity and needs assessment reports concerning cancer, individualized for each county in the state. This Report Summary highlights key findings in the Salem County report.

The Task Force released New Jersey's Comprehensive Cancer Control Plan (NJ-CCCP)¹ in 2002. Each county was commissioned to develop a comprehensive capacity and needs and assessment report, as part of the initial implementation steps for the NJ-CCCP. The full Report and this Report Summary were developed under the direction of the University of Medicine and Dentistry of New Jersey (UMDNJ) and the Evaluation Committee of the Task Force, in furtherance of the NJ-CCCP (which can be found at:

http://www.state.nj.us/health/ccp/ccc_plan.htm
Description:
Description:
OCCP and conducted through the following New Jersey Cancer Education and Early Detection
(NJCEED) county agency in Salem County:
Salem County Health Department.

The purpose of the capacity and needs assessment reports is to identify the major cancer issues affecting each county and the county's available resources, or lack thereof, for cancer prevention, screening, and treatment, and to propose recommendations for improvement. The Salem County Cancer Capacity and Needs Assessment Report² analyzes the population demographics and the cancer incidence and mortality rates and distribution of stage at diagnosis for the seven priority cancers of the NJ-CCCP (breast, cervical, colorectal, lung, oral, melanoma, and prostate), as well as current resources available, in the county to address the needs of cancer. These data guided the development of evidence-based recommendations and interventions to address cancer control priorities at local and state levels.

Section 1 – County Demographic Profile

Salem County New Jersey is comprised of several inland communities that border Delaware. The county, in close proximity to Pennsylvania, has a population of 64,285 people (men: 31,047 and women: 33,238) living in 15 municipalities. Ranked by population, Salem County is the smallest county in New Jersey. Located at the southwest edge of the state, the county covers 372.57 square miles, with 337.88 square miles of land and 34.69 square miles of water. The county has the lowest population density for the state, at 190.3 people per square mile of land compared to 1,134.40 for New Jersey.³

The population of Salem County decreased by 1.5% between 1990 and 2000, compared to an 8.9% increase in New Jersey as a whole.^{a,4} The following demographics, based on 2000 Census data, highlight Salem County's population:^{3,4}

- A slightly higher median age (38.0 years) compared to New Jersey (36.7 years).
- A large increase in the 45- to 49-year age group (23.9%) and the 50- to 54-year age group (40.2%) between 1990 and 2000.
- Thirty-one percent (31%) of the population in the 35- to 54-year age cohort, which is the same as New Jersey.
- Large decreases in the 20- to 24-year age cohort (16%), in the 25- to 34-year age cohort (23%), and in the number of children under five years (8.8%).
- A population of 30,185 people (14,029 men and 16,156 women) age 40 and over.
- A slightly higher percentage (14%) of the population 65 years and over compared New Jersey (13%).

The racial/ethnic composition^b of Salem County in 2000 can be characterized as follows:³

- A larger segment of the population was white compared to New Jersey (81% versus 73% for the county and the state, respectively).
- A larger segment of the population was black compared to New Jersey (15% versus 14% for the county and the state, respectively).
- A smaller segment of the population was Hispanic compared to New Jersey (3.9% versus 13% for the county and the state respectively).

Three municipalities in the county had black populations over 1,000 people: Salem City (3,325; 57% black); Penns Grove Borough (1,942; 40% black); and Carneys Point Township (1,250; 16% black). Penns Grove Borough had the highest number of Hispanic people in the county (845; 17%).³

In Salem County, 94% of the population spoke only English at home, while 6.3% spoke a language other than English in 2000. Only 2.6% of the population spoke English less than "very well." There were approximately 358 linguistically isolated households consisting of 0.6% of Salem County. Most linguistically isolated households were located in Carneys Point Township, Penns Grove Borough, Pennsville Township and Salem City. Although there are several languages spoken, Spanish was the predominant language (other than English).³

^a In general, percentages in this report are rounded to two digits.

b Hispanics and non-Hispanics may be of any race. Racial categories include both Hispanics and non-Hispanics.
c A linguistically isolated household is one in which no member 14 years old and over (1) speaks only English or (2)

speaks a non-English language and speaks English "very well". In other words, all members 14 years old and over have at least some difficulty with English.

In 1999, Salem County ranked lower on all the income measures when compared to New Jersey.^d There was also a substantial difference in income earnings between men and women in both Salem County and New Jersey.³ Several examples follow.

- Median household income (Salem County \$45,573 versus New Jersey \$55,146);
- Median family income (\$54,890 versus \$65,370);
- Per capita income (\$20,874 versus \$27,006);
- Male median earnings (\$41,860 versus \$46,368) and female median earnings (\$27,209 versus \$33,081)

A greater percentage of Salem County residents were receiving Social Security income compared to New Jersey (30% versus 27% for county and state, respectively), Supplemental Security income (4.1% versus 3.5%), Public Assistance income (3.0% versus 2.8%) and Retirement income (23% versus 17%). Unemployment in Salem County was 6.6% compared to 5.8% for New Jersey. There were fewer management, professional, and related occupations in the county than in the state as a whole (28% compared to 38%) and more production, transportation, and material moving occupations (20% in the county compared to 12% in the state).³

In 1999, 9.5% of Salem County residents for whom poverty status could be determined had incomes below the federal poverty level, slightly higher than was the case in New Jersey (8.5%). Specific municipalities have even larger populations living in poverty. Salem City, Penns Grove Borough, and Carneys Point Township had the highest number of residents and percentage of its municipality living below the poverty level. Salem County had an estimated 14,749 residents with incomes at 200% of the federal poverty level or lower (23% of the county population).⁵

In 2000, Salem County had a lower educational attainment level than did New Jersey. Compared to the state, the county had larger population proportions with less than an 8th-grade education (7.1% versus 6.6% for the county and state, respectively) or who did not complete high school (14% versus 11%), a greater proportion who ended school with high school (39% versus 29%), and a lower percentage of residents with bachelor's degrees (11% versus 19%).³

In Salem County, 83% of workers 16 years and over drove alone to work compared to 73% for New Jersey. Lack of public transportation represents a significant problem in the county. In Salem County, 1.2% of the population, compared to 9.6% for New Jersey, took public transportation to work. Approximately 4.0% or 705 people who own their own home and 25.4% or 1,667 people who rent their housing unit had no vehicle available. Transportation is a particularly important issue in specific communities. In Penns Grove Borough and Salem City, for example, 20% of those who rented in each community had no vehicles available for the unit.³

Salem County had a lower birth rate and a higher age-adjusted death rate (from all causes) than did New Jersey as a whole (birth rate: 12.6 versus 13.7 per 1,000; death rate: 982.2 versus 852.4 per 100,000). In 2000, the leading causes of death for New Jersey were heart disease, cancer, stroke, chronic respiratory disease, diabetes, and unintentional injuries. In Salem County, the death rates per 100,000 attributable to these six causes in 2000 were 311.9 for heart disease,

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^d All figures for poverty, income, and employment are from the 2000 Census, but refer to the year 1999.

247.6 for cancer, 66.9 for stroke, 34.2 for chronic respiratory disease, 32.9 for diabetes, and 43.0 for unintentional injuries. The death rates in the county were higher than the corresponding state rates in several categories. The death rates in the county were higher than the corresponding state rates in several categories.

Section 2 – Overview of Overarching Issues

The majority of Salem County healthcare services are located in a centralized area that includes Woodstown Borough, Mannington Township, and Salem City. The two hospitals in the county are Memorial Hospital of Salem County and South Jersey Hospital – Elmer. A number of additional hospitals are located in the surrounding areas of Cumberland County, Gloucester County, Delaware, and Pennsylvania. Some information regarding cancer screening, education, advocacy, treatment, palliation, and other activities has been collected to identify resources currently available in Salem County. This information was included in the statewide Cancer Resource Database of New Jersey (CRDNJ). However, the adequacy of the cancer resources in the county remains undetermined. Further study of capacity for in-county, in-state, and out-of-state services is necessary. Information about specific services in the county are detailed in the Capacity and Needs Assessment Report, Section 2 – Providers and Treatment. Section 2 – Providers and Treatment.

Health Insurance

Detailed information documenting the number of people lacking health insurance is not available at the county level. Estimates of the number of uninsured people in Salem County vary from 8,000–9,000. These estimates may be on the low side because of the number of undocumented migrants working in agriculture in Salem County.

Without health insurance, access to healthcare may be diminished, which may result in cancer diagnoses occurring at later stages and higher morbidity and mortality rates. Salem County does have some options for uninsured patients needing healthcare, including the local New Jersey Cancer Education and Early Detection (NJCEED) program, delivered by the Salem County Health Department. This program offers free breast, cervical, colorectal, and prostate cancer screening for those who are uninsured or underinsured and are at or below 250% of the federal poverty level. (Please refer to the full report, Section 2 – Resources for additional information).

Education

Salem County has 15 operating school districts comprising 32 schools. ¹³ This number includes public, special services, and technical schools, but not private schools. State law requires the teaching of health, safety, physical education, alcohol and drug use, sex education, and breast

^e All death rates are age-adjusted, for both males and females of all races, based on the 2000 U.S. standard population. The listed causes of death are the top six causes for the entire state. These may not necessarily be the top six causes for the county. Categorization is based on ICD-10 codes: I00-I09, I11, I13, I20-I51; C00-C97; I60-I69; J40-J49; E10-E14; V01-X59, Y85-Y86.

^f The statewide death rates per 100,000 in 2000 were 269.4 for heart disease, 205.9 for cancer, 49.0 for stroke, 34.1 for chronic respiratory disease, 28.2 for diabetes, and 26.7 for unintentional injuries.

^g Data collection for the CRDNJ was performed utilizing standardized forms, referred to as "TELEform surveys," which were generated from TELEformTM software.

self-examination (after 7th grade).¹⁴ All schools teach health in some capacity; however, there is no standard curriculum or mandated time dedicated to the subjects. Avoidance of smoking, alcohol and drug use in all grade levels is a high priority. Cancer may be briefly mentioned as a separate topic or in its relationship to poor health behaviors (i.e., smoking, using sunscreen, etc.) in the school systems.¹⁵

Palliative Care

In Salem County, South Jersey Healthcare Community Services, Trinity Hospice, and Visiting Nurse Service System offer hospice services. South Jersey Healthcare Elmer Hospital and Memorial Hospital of Salem County provide social workers or nurses to facilitate case management and referral to other services as appropriate. Hospice care can be provided in the home or in a nursing home.¹⁵

Nutrition and Physical Activity

Some link has been established between nutrition, physical activity, and cancer, although the exact extent of the connection is still unknown. Approximately one-third of all cancers might be attributed to diet. The 2000 New Jersey Behavioral Risk Factor Surveillance System (BRFSS) estimated that approximately 37% of adults (aged 18 and over) are overweight and 18% of adults are obese statewide. Applying these statewide percentages to Salem County would suggest there are approximately 23,000 overweight and 11,000 obese adults in Salem County.

Childhood Cancers

Salem County does not have the necessary resources to serve children with cancer. There are a number of resources in Delaware and Pennsylvania. Several factors account for the lack of pediatric cancer services in the county:

- Pediatric oncology is a specialized cancer field.
- Pediatric cancer care is often believed by the public to be better suited to being provided in major cities where facilities are specialized and a greater number of patients with cancer may be treated more regularly.
- Salem County may lack a sufficient number of children with cancer to warrant a dedicated pediatric cancer facility.

Advocacy

The extent of advocacy activity conducted at the local level in Salem County is unknown. Many advocacy initiatives focus on smoking ordinances. Efforts to impact state legislation will ultimately affect each county by providing aid or mandating care for residents. Some examples of cancer advocacy efforts are the New Jersey Breast and Cervical Cancer Treatment Act

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^h Overweight is defined as a Body Mass Index (BMI) between 25.0 and 29.9, using current standards. Obesity is defined as a BMI of 30.0 or greater. BMI is calculated by multiplying the weight (in pounds) by 703, then dividing the result by the square of the height (in inches).

(NJCEED Programs); requirements for private insurance coverage for prostate cancer screenings, mammograms, and Papanicolaou ("Pap") tests; and the "Conquer Cancer" license plates fundraising efforts. ^{19,20}

Section 3 – Cancer Burden

All incidence²¹ and mortality²² rates cited herein are per 100,000 and age-adjusted to the 2000 U.S. population standard³. All county and state rates are average annual rates during 1996–2000. For simplicity, the 1996–2000 average annual age-adjusted incidence or mortality rate hereinafter will be abbreviated and referred to as incidence or mortality rate, respectively. The reason the five-year average has been routinely used is that the small number of cases in a single year leads to statistical variations that are not generally meaningful. For U.S. incidence rates, 1999 or 2000 rates were used. Unless otherwise specified, all rates are for invasive cancer only.

Overall Burden of Cancer in Salem County

Cancer is the second most common cause of death in the county. Salem County's overall incidence rates were lower for men and slightly higher for women than the corresponding state rates. The Salem County cancer incidence rates for all sites combined were 580.4 per 100,000 for men (7.7% lower than the state rate of 628.7 per 100,000) and 461.4 per 100,000 for women (1.7% higher than the state rate of 453.7 per 100,000). On average, 180 men and 182 women in the county were diagnosed with cancer each year during the period 1996–2000. White men and women accounted for by far the highest number of cancer diagnoses, due to their greater numbers in Salem County. Minorities are a population of focus in regard to healthcare in general. Salem County has a very small minority population so statistical analysis of these subpopulations is quite difficult. It will be important for the county to monitor these numbers over time.

Overall, cancer is diagnosed more often in older adults, and more often in men than women. This report specifically identifies statistics for breast, cervical, colorectal, lung, melanoma, oral/oropharyngeal, and prostate cancers. Breast, colorectal, lung, and prostate cancers were the most common cancers in Salem County, as in the state as a whole. These cancer sites accounted for the greatest number of new cancer diagnoses reported during the period from 1996 through 2000. Over this five-year period, a total of 261 new cases of breast cancer in women, 224 new cases of colorectal cancer (116 in men and 108 in women), 294 new cases of lung cancer (165 in men and 129 in women), and 248 new cases of prostate cancer in Salem County were diagnosed.

The Salem County 1996–2000 mortality rate for all cancer sites combined was higher for both men and women than the corresponding New Jersey mortality rates (285.3 versus 261.4 per 100,000 for men and 208.9 versus 181.7 per 100,000 for women in county and state, respectively). This is of specific concern since incidence rates for males in the county were much lower than those in the state. Of New Jersey's 21 counties, Salem County had the second highest mortality rate for all cancer sites combined for men and the highest mortality rate for women. Approximately 430 men and 430 women died of cancer from 1996 through 2000 in Salem County.

¹ These totals include invasive cancers. *In situ* cancers are not included in this or other totals.

Summary Table of Selected^a Age-Adjusted^b Salem County Cancer Statistics, 1996–2000^c

	Estimated Prevalence ^d	Incidence per 100,000 ^e	Mortality per 100,000 ^e
All Cancers, Salem County			
Male	1,000	580.4	285.3
Female	1,607	461.4	209.0
NJ-CCCP Priority Cancer by Gender			
Breast, female	597	136.7	27.4
Cervical, female	75	12.5	3.8
Colorectal, male	126	76.7	31.5
Colorectal, female	168	50.5	23.7
Lung, male	47	105.0	82.0
Lung, female	57	63.5	55.7
Melanoma, male	53	16.9	7.4
Melanoma, female	59	10.2	1.0
Oral/Oropharyngeal, male	35	16.4	6.4
Oral/Oropharyngeal, female	24	7.0	2.1
Prostate, male	363	157.9	26.5

^a Based upon the NJ-CCCP.

Cancer Burden by Site

Breast Cancer

The breast cancer incidence rate in Salem County was lower than that in New Jersey (136.7 versus 138.5 per 100,000 for county and state, respectively). The mortality rate for breast cancer was also lower in Salem County than in New Jersey (27.4 versus 31.3). Stage at diagnosis for the disease was consistent with that in New Jersey, and the population of focus relative to breast cancer is women over age 40 of all races.

^b Age-adjusted to 2000 U.S. Census population standards. Age-adjustment is used to describe rates in which statistical procedures have been applied to remove the effect of differences in composition (specifically, variations in age distribution) of the various populations. This is important in order to portray an accurate picture of the burden of cancer, since cancer is known to disproportionately affect persons of differing ages.

^c Rates are average annual rates during the time period 1996 through 2000.

^d Prevalence is the measurement of burden of disease in the population at a particular point in time. Within this report, it represents the number of people alive who have ever been diagnosed with the disease. Prevalence figures given here are rough theoretical estimates, based on a number of assumptions, and computed by applying national prevalence-to-incidence ratios to Salem County's average annual crude incidence counts for the five years 1996–2000, separately for each gender. Actual prevalence is likely to be of the same order of magnitude as the estimate.²³ ^e Incidence and mortality are gender-specific, age-adjusted annual rates, not counts. A rate at least 10% higher than the corresponding state rate is shown in bold italics.

f "All cancers" represents the sum of all invasive cancer during the time period, not just the seven cancers presented in detail below.

Evidence suggests that increasing the percentage of early-stage breast cancer diagnoses through regular use of mammography may reduce the mortality rate.^{j,24} This emphasizes the need to educate women and providers about the importance of early screening and mammography.

In New Jersey, among 3,923 women aged 50 and over who were interviewed from 2000 through 2002, 78% reported having had a mammogram within the past two years. The screening level in Salem County did not differ significantly from that in the state overall, but only 24 women within the county were interviewed. As there are 10,918 women aged 50 and over in the county, the BRFSS data suggest approximately 7,860 mammograms were conducted per year just in this age group.

The population of greatest concern for breast cancer is women of all races aged 40 years and over, as incidence and mortality rates increase as women age. In 2000, 16,156 women, or 49% of the women in Salem County, were aged 40 and over. Pennsville Township, Carneys Point Township, and Pittsgrove Township had higher concentrations (2000 or more) of women aged 40 and over in Salem County.³ Although breast cancer affects women of all socioeconomic levels, women with lower educational attainment and lower incomes may not be screened regularly. Of special concern are the estimated 8,974 women 45 and over with a high school diploma or less and an estimated 1,046 women 45 and over who live below the federal poverty line (1.7% of the population).³ Uninsured women are less likely to be screened regularly than are insured women.²⁶ Women with inadequate healthcare coverage may be diagnosed at a later stage of disease, which has negative implications for survival.²⁶ Women with specific unhealthy lifestyles such as high-fat diets and lack of physical exercise, as well as women using oral contraceptives long term or starting at an early age, or using hormone replacement therapy long term, may be at increased risk for breast cancer, and consequently should be a focal point.²⁷

Cervical Cancer

Salem County's cervical cancer incidence rate was higher than that of New Jersey (12.5 versus 10.9 per 100,000 for the county and state, respectively), but was based on a small number of cases (22). The cervical cancer mortality rate was 3.8 per 100,000 for Salem County, based on only 7 cases over the five-year period 1996–2000, and 3.1 for New Jersey. The population of focus for cervical cancer is women of all races aged 18 and over.

Papanicolaou ("Pap") tests, which detect some precancerous as well cancerous lesions, are covered by most private and public health insurance. Some companies have moved to cover a more sensitive and specific screening test, the AutoPap, which uses a thin preparation of cells along with computer-assisted technology. In New Jersey, among 7,689 women with no history of hysterectomy who were interviewed from 2000 through 2002, 83% reported having had a Pap smear within the past three years. The rate for Salem County does not significantly differ from that for the state overall, but only 37 women within the county were interviewed. The state overall, but only 37 women within the county were interviewed.

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^j Early diagnosis of breast cancer, through regular use of mammography, appears to reduce mortality from the disease. "Randomized clinical trials have demonstrated a 30% reduction in breast cancer mortality in women aged 50 to 69 years who are screened annually or biennially with mammograms." The reduction is about 17% for women aged 40 to 50 years.¹

A recent New Jersey study identified several factors impacting on the decision not to obtain a Pap test including: lack of awareness of risk factors, cost, feelings of embarrassment, discomfort related to the Pap test, and beliefs that older women do not contract cervical cancer. A New Jersey Hospital Association report adds additional concerns including: hassles with the healthcare systems, lack of priority for prevention, inconvenience or lack of services, language barriers, transportation, childcare, and cultural sensitivity. The NJ-CCCP Cervical Cancer Workgroup recommends disseminating public education to all women through outreach programs. The target should be women at high risk as well as young school-aged women. He Workgroup also recommended educating patients and healthcare professionals about cervical cancer, risk factors, screening guidelines, follow-up, and treatment options.

Cervical cancer is of greatest concern to women of all races 18 years of age and older. The incidence rates remain constant past age 40, but mortality rates increase with age. It has been suggested that the relatively greater increase in mortality rates for the disease among older women may reflect a misperception that there is a decreased risk of cervical cancer after menopause, leading to decreases in screening and delays in diagnosis. Age-stratified data on cervical cancer by stage at diagnosis for New Jersey during the period 1996–2000 are consistent with this hypothesis, as they show an increase in percentage diagnosed at regional and distant stages and a decrease in percentage diagnosed at localized stage with increasing age. In 2000, 25,147 women in Salem County (39% of the total county population) were aged 18 and over. Pittsgrove Township, Pennsville Township, and Carneys Point Township are communities in Salem County with a higher concentration (upwards of 3000) of women aged 18 and over.³ Although cervical cancer affects women of all socioeconomic levels, uninsured women are less likely to receive screening than insured women.²⁶ Women with inadequate healthcare coverage may be diagnosed at a later stage, with a negative impact on survival. 26 Other risk factors for cervical cancer include women who had an early onset of sexual intercourse, have a history of multiple partners, have a history of sexually transmitted disease, especially human papillomavirus (HPV) and human immunodeficiency virus (HIV), obesity, and smoking.²⁷ The most important risk factor for cervical cancer is HPV, and screening for HPV should be included routinely. 30,31

Colorectal Cancer

Salem County colorectal cancer incidence rates were slightly lower than those of New Jersey for men (76.7 per 100,000 in the county compared to 79.0 per 100,000 in the state) and for women (50.5 in the county versus 54.4 in the state). Mortality rates for the disease among both men and women were higher in Salem County than in New Jersey (men: 31.5 versus 29.5 per 100,000 and women: 23.7 versus 20.1 in the county and state, respectively). The distribution by stage at diagnosis for colorectal cancer was consistent with that of New Jersey. As in New Jersey as a whole, the populations of focus for colorectal cancer are men and women of all races aged 50 and over.

Colorectal cancer screening numbers are generally low. In New Jersey, among 4,961 adults aged 50 and over who were interviewed from 2001 through 2002, 56% reported having had colorectal cancer screening (either with a fecal occult blood test within the past year or a sigmoidoscopy or

colonoscopy ever). ^{11,25} The screening level in Salem County did not differ significantly from that in the state overall, but only 27 adults within the county were interviewed. ²⁵

The NJ-CCCP has identified several possible factors for the low colorectal cancer screening percentages. Reasons for patients' failure to obtain screening may include: lack of understanding about the tests, the unpopular nature of the subject, concerns about pain, and lack of information about the recommended screening schedule. Reasons for healthcare providers' failure to screen include: inadequate training and experience regarding colorectal screening, a lack of time to discuss the subject with patients, and some concern about the efficacy of the screening tests. Inadequate reimbursement, high costs of the tests, and limited access have also been cited as reasons these tests are not performed.³²

Colorectal cancer is highly curable when detected in the early stages and has a 90% five-year survival rate. However, only approximately 37% of new colorectal cancer cases in New Jersey were diagnosed in the localized stage. ^{33,34,35} For this reason the NJ-CCCP Colorectal Cancer Workgroup identified education and public awareness as important goals to reduce mortality and improve survivorship for colorectal cancer. ³⁶

Colorectal cancer is of greatest concern to men and women of all races aged 50 and over. Incidence and mortality rates for the disease increase with age. In 2000, 20,008 men and women or 31% of the total population in Salem County were aged 50 and over. Carneys Point Township, Pennsville, and Pittsgrove Township are communities in Salem County with a higher concentration (2000 or more) of men and women aged 50 and over. New Jersey statistics demonstrate that black populations, especially black men have an increased risk of colorectal cancer. While the number of black men in Salem County is small, and consequently the number of cases is low, the colorectal cancer incidence rate for black men is higher than that for white men, so black men are a population of concern. Although colorectal cancer affects men and women of all socioeconomic levels, men and women with lower educational attainment and lower incomes may not be screened regularly. The concern is that those with inadequate healthcare coverage will be diagnosed at a later stage of disease, negatively affecting their chances of survival. Unhealthy lifestyles such as diets high in fat and animal sources, physical inactivity, smoking and alcohol intake, as well as family history of colorectal cancer should become a focus for outreach efforts because of the increased risk.

Lung Cancer

Salem County's lung cancer incidence rates were higher than those of New Jersey for both men (105.0 versus 92.5 per 100,000 for county and state, respectively) and women (63.5 versus 55.4 per 100,000). Mortality rates for the disease among both men and women were also higher in Salem County than in New Jersey (men: 82.0 versus 74.9 per 100,000 and women: 55.7 versus 41.6 per 100,000 in county and state, respectively). Stage at diagnosis is not available for lung cancer because it can seldom be diagnosed in the early stages. The populations of focus are men and women who smoke, as are children and young adults for antismoking educational efforts.

Lung cancer is of greatest concern among men and women who smoke. Almost nine of ten cancer cases appear to result from tobacco smoking.³⁷ Repeated exposure to carcinogens

increases the chances of lung cancer. Both incidence and mortality rates for lung cancer increase as men and women age (especially over age 50). In 2000, 20,008 men and women in Salem County (31% of the total county population) were aged 50 years and over. Carneys Point Township, Pennsville Township, and Pittsgrove Township are communities in Salem County with a higher concentration (2000 or more) of men and women aged 50 and over.³ BRFSS trend statistics for New Jersey indicate that in 2000, 21% of New Jersey adults smoked cigarettes; 21% of those aged 50 to 64 years and 11% of those aged 65+ years smoked.³⁸ Comparable information is not available for Salem County, but based on the statewide percentages for the two age groups, it can be estimated that there are approximately 3,200 residents aged 50 and over in Salem County, which can be considered a minimum estimate for the number of smokers in Salem County.³

Although lung cancer affects populations of all socioeconomic levels, men and women with lower educational attainment and lower incomes are more likely to smoke. BRFSS data for New Jersey indicate that in 2002, 27% of adults with household incomes less than \$15,000 per year smoked compared to 18% of adults with household incomes of \$50,000+ per year. Also, 27% of adults with less than a high school education smoked compared to 12% of college graduates.

It is clear that lung cancer is largely preventable so the goal should be to prevent people from initiating smoking. Therefore, another important population relative to smoking is children and young adults, especially teenagers. It has been demonstrated that repeated exposure to smoke over time increases the risk for lung cancer. Current smokers and children therefore are populations of focus. Exposure to environmental tobacco ("second-hand") smoke remains an additional important issue.³⁹

Melanoma

Salem County's melanoma incidence rates were lower than those for New Jersey among both men (16.9 versus 20.1 per 100,000 for the county and state, respectively) and women (10.2 versus 11.9 per 100,000). The melanoma mortality rates per 100,000 were 7.4 for men and 1.0 for women in Salem County, compared to 4.4 for men and 1.9 for women in New Jersey. The percentage of late-stage melanoma diagnosis was significantly higher among men in the county than in the state and was consistent among women in the county and in the state. The populations of focus for melanoma are white men and white women aged 50 and over, especially men, as well as younger age groups to target for prevention activities.

The NJ-CCCP Melanoma Workgroup identified the need for early detection and screening to decrease both the incidence and the mortality rates for melanoma. Berwick et al. demonstrated that self-examination could decrease the incidence of invasive melanomas. ⁴⁰ Consequently, the Workgroup has recommended the dissemination of information and education about prevention at public schools, worksites, recreation facilities, and healthcare facilities.

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^k Among men, 21% of cases (6 out of 29 staged cases) in the county were diagnosed in the late stages (regional or distant), compared to 9.1% of cases (455 out of 5,003 staged cases) in the rest of the state (excluding Salem County).

Despite information about the impact of the ultraviolet (UV) rays from the sun on skin cancer, few people protect themselves appropriately. According to the 1998 National Health Interview Survey, only 27% of adults sought shade, 23% wore protective clothing, and 30% routinely used sunscreen. The 1999 BRFSS estimated that 31% of New Jersey men and 22% of New Jersey women had a sunburn in the previous 12 months. In terms of age, responses demonstrated that 40% of those aged 18–34 had a sunburn in the previous year, a higher percentage than in any other age group. Due to the long period of time between sun exposure and the development of skin cancer, special focus for melanoma should be directed toward this age group (18–34), as well as children.

Melanoma is of greatest concern among the white population, especially white men. Incidence rates steadily increase as this population ages, especially after age 50. Fair skin is the highest risk factor for sun damage due to the lack of protective pigmentation.²⁷

Oral/Oropharyngeal Cancer

Salem County's oral and oropharyngeal cancer incidence rates were consistent with those of New Jersey for both men (16.4 versus 15.7 per 100,000 for county and state, respectively) and women (7.0 versus 6.4 per 100,000). Although the oral/oropharyngeal cancer mortality rates for Salem County (6.4 per 100,000 for men and 2.1 for women) were higher than the corresponding state rates (4.2 for men and 1.6 for women), the county rates were based on a very small number of deaths.

Stage at diagnosis is the most important factor in predicting oral cancer survival. Cases diagnosed at early stages have a 75% or greater five-year survival rate while those diagnosed at late stages have a survival rate of 25% or less. ^{43,44} Although doctors recommend oral screenings, and it seems entirely reasonable that such screenings are helpful, it is not known if screening reduces mortality rates. In Salem County, the distribution by stage at diagnosis for oral cancer was consistent with that in New Jersey as a whole.

A dentist or doctor can screen for oral cancer during a physical examination. Approximately 81% of dentists reported that they perform oral cancer examinations for all patients aged 40 years and older, and 78% of dentists reported performing oral cancer examinations at recall appointments. It is not clear whether dentists are screening properly. A detailed survey on procedures in the county and state would be necessary to document this issue.

Alcohol abuse and tobacco use are risk factors for several cancers, including oral/oropharyngeal cancer. Ninety percent (90%) of those with oral cancer used tobacco (smoked or chewed) and 75%–80% of all patients with oral cancer frequently consumed alcohol. Although oral/oropharyngeal cancer affects populations of all socioeconomic levels, BRFSS data for New Jersey indicate that men and women with lower educational attainment and lower incomes are more likely to smoke, as indicated in the previous section on lung cancer. As tobacco and alcohol users are at the highest risk for oral/oropharyngeal cancer, they are a population of focus. In addition, younger age groups should be the focus of prevention activities.

Prostate Cancer

Salem County's prostate cancer incidence rate was much lower than that of New Jersey (157.9 versus 194.3 per 100,000 for the county and state, respectively). The county mortality rate for prostate cancer was also lower than that of New Jersey (26.5 versus 32.9 per 100,000 for the county and state, respectively). The percentage of prostate cancer cases diagnosed at the early stages (*in situ* or localized) was lower in the county (78%) than in New Jersey as a whole (86%).

The prostate cancer incidence rate for black men in the county (322.0 per 100,000) was more than double the incidence rate for white men in the county (134.8) and 14% higher than the incidence rate for black men in the state (282.9). The prostate cancer mortality rate for black men in the county was suppressed due to the small number of deaths. The populations of focus for prostate cancer are men of all races aged 50 and over, especially black men.

Scientific consensus has not been reached on the effectiveness of prostate cancer screening because it is unclear whether screening reduces the mortality rate. The Centers for Disease Control and Prevention does not recommend prostate cancer screening, but rather that men be provided with up-to-date information about screening, including the potential harms and benefits. The American Urological Association and the American Cancer Society also recommend that physicians should routinely present prostate cancer screening options and offer the prostate-specific antigen (PSA) blood test and digital rectum examination (DRE) to high-risk men, such as black men and all men with a family history of prostate cancer at an early age, beginning at age 40 or 45. Many physicians do recommend screening for their patients and handle the decision to screen on a case-by-case basis. More studies and randomized trials are necessary to determine if early detection reduces mortality. On the prostate cancer screening for their patients are necessary to determine if early detection reduces mortality.

Prostate cancer is of greatest concern to men of all races aged 50 and over, but especially black men. The incidence and mortality rates increase for men aged 50 and over, but make a substantial jump after the age of 65. In 2000, 9,090 men in Salem County (14% of the total county population) were aged 50 and over. This includes 5,311 men aged 50 to 64 years (8.3%) and 3,779 men aged 65+ years (5.9%). Carneys Point Township, Pennsville Township, and Pittsgrove Township are communities in Salem County with a higher concentration (at least 1000) of men aged 50 and over. Black men are considered at increased risk for prostate cancer. The black male population (1,070) represents 1.7% of the total population of the county. Higher concentrations of black men reside in Carneys Point Township, Penns Grove Borough, and Salem City.³ Although prostate cancer affects men at all socioeconomic levels, men with lower educational attainment and lower incomes may not be screened regularly.²⁶ In 2000, Salem County had 7,419 men with a high school diploma or less. With regard to income, 0.9% of men in the county aged 45 and over live below the federal poverty line.³ The concern is that men with inadequate healthcare coverage will be diagnosed at a later stage of disease, which will ultimately affect their survival.²⁶

Other Cancer Sites/Issues

HIV/AIDS. Human immunodeficiency virus (HIV) is the etiologic agent of the acquired immunodeficiency syndrome (AIDS) and is associated with the development of several specific

cancers.¹ As of December 31, 2003, Salem County had the tenth highest prevalence rate of known HIV infection in New Jersey, which was 37% lower than the state rate.^{1,50} The number of HIV/AIDS cases in Salem County is not high (less than 0.5% of cases in the state); however, both healthcare providers and patients need to understand the risks.

Bladder Cancer. New Jersey's bladder cancer incidence rates were higher than those of the nation for all race and ethnic categories.⁵¹ Mortality due to bladder cancer in men was higher in New Jersey than in the nation overall. The American Cancer Society estimated that bladder cancer in 2003 would be the 6th most common cause of cancer mortality in the U.S. and 5th most common in New Jersey.⁵² For Salem County, bladder cancer incidence rates for men and women were lower than the state rates. Bladder cancer mortality for women in Salem County was among the lowest in the state. For men, the bladder cancer mortality rate was higher in the county than in the state (11.3 per 100,000 in the county versus 9.4 in the state), although the actual number of deaths in the county was low (16 cases over the five-year period).

Section 4 – Discussion, Analysis and Recommendations

Recommendations are divided into local and statewide priorities, many of which are linked or are similar. Many recommendations follow the NJ-CCCP goals and objectives and are focused on cancer awareness, cancer screening, early detection, and prevention/education. In addition, recommendations specific to the NJ-CCCP priority cancers are included.

Recommendations for County and Local Priorities

Based on concerns relevant to the county's demographics, available resources, and cancer burden, the following healthcare recommendations have been identified as significant:

- ✓ Establish a Cancer Coalition within the county to address pressing cancer control and treatment issues and implement the New Jersey Comprehensive Cancer Control Plan.
- ✓ Develop an educational campaign for the county about risk factors, early detection and screening, signs and symptoms, and prevention through media outlets and the proposed Cancer Coalition.
- ✓ Educate students in school health classes about chronic diseases, specifically cancer, to facilitate a clear understanding of the importance of prevention, screening, and health insurance coverage, as well as nutrition and obesity issues.
- ✓ Teach healthcare providers about the importance of cancer screening. Physician recommendations have been identified as the major motivator for people to be screened for cancer.
- ✓ Promote tobacco reduction to prevent lung and oral cancers, as well as other cancers. Smoking cessation programs should be advertised and continued with financial assistance

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¹ Includes persons living with AIDS who may not have been tested for HIV. As this does not include persons living with HIV who have not been tested, only an unknown portion of total infections is included. The estimated prevalence rate in Salem County was 229.7 per 100,000, compared to 364.6 in the state.

- for those in need. The Communities Against Tobacco (CAT) Coalition should be supported and strengthened to increase the number of public areas that are smoke free.
- ✓ Conduct a Primary Care Provider project to identify physician practices and patient care programs. Conduct a brief telephone survey to discover crucial information about cancer care in physicians' offices. Primary care physicians have a major impact on patients, and educational materials could be developed for physicians based on the information revealed in the survey.

Recommendations for Specific Cancer Sites

- ✓ **Breast Cancer.** Develop an educational promotion through the Salem County Cancer Coalition and lead agencies to create educational materials and generate enthusiasm within the community. Conduct events such as breast health clinics and screenings in October and May, during which health or treatment recommendations would be provided, when appropriate, especially to low-income, underserved, and uninsured women. Also develop education for healthcare professionals to stress the need for continued communication with patients so they are not lost to follow-up and treatment. (BR-1 through BR-5)
- ✓ Cervical Cancer. Increase Pap test usage especially in high-risk women because cervical cancer is more easily treated in precancerous stages. Although cervical cancer numbers are low, cervical cancer education can be conducted in conjunction with breast education to maximize resources. Target high schools to educate younger women, and focus on family practices, ob/gyn physicians, emergency rooms, and family planning facilities. (CE-2)
- ✓ Colorectal Cancer. Develop an educational promotion through the Salem County Cancer Coalition and lead agencies to create educational materials and generate enthusiasm within the community. Conduct events such as colorectal health clinics and screenings, during which health or treatment recommendations would be provided, when appropriate, especially for low-income, underserved, and uninsured men and women. Also develop education for healthcare professionals to stress the need for and benefits of colorectal cancer screening, along with continued communication with patients so they are not lost to follow-up and treatment. (CO-2)
- ✓ **Lung Cancer.** Support collaborative efforts of the CAT Coalition, the Salem County Cancer Coalition and lead agencies to encourage people to quit smoking, as well as to participate in clinical trials. Also educate physicians and clinic and emergency room staff about the importance of a physicians' role in firmly encouraging patients to quit smoking. Physician recommendation has been demonstrated to be highly motivating for patients. (LU-1, LU-2, LU-5)
- ✓ **Melanoma.** A campaign similar to "Whatever Skin You're In, Choose Your Cover" should be initiated by the Salem County Cancer Coalition and lead agencies prior to the

^m "Whatever Skin You're In, Choose Your Cover" was launched by the NJDHSS and kicked off in Ocean City, New Jersey, in May 2003. This campaign was designed to remind the public about sun safety, with posters and pamphlets distributed in high-impact areas such as parks, camps, and beaches, as well as schools throughout New Jersey. Billboards were also placed in every county in the state.

summer season to remind people of the sun's dangers and methods for effective prevention and screening. The program could be initiated with information in the local newspaper and radio announcements. Literature should be available and information posted at: stores where sunscreen is being sold, physicians' offices and hospitals, workplaces, stores, and recreation activities. The campaign could culminate each season with a screening clinic to teach people how to identify skin cancers. (ME-1, ME-4, ME-5, ME-6)

- ✓ Oral/Oropharyngeal Cancer. Increase awareness about oral cancer by incorporating information in existing smoking and health literature and outreach efforts in the county. Oral/oropharyngeal cancer should be considered an additional risk of smoking, as are lung cancer, emphysema, and heart disease. Motivate physicians and dentists to raise awareness of prevention and detection of oral cancer among their patients. (OR-1, OR-3, OR-4)
- ✓ **Prostate Cancer.** Develop an educational promotion through the Salem County Cancer Coalition and lead agencies to create educational materials and generate enthusiasm within the community. Target specific community leaders, especially in the black community to encourage men to participate in events such as June prostate and health clinics. Providers can use these opportunities to make appropriate recommendations about screening and detection, especially for low-income, underserved, and uninsured men. Also develop educational programs for healthcare professionals to stress the need for continued communication with patients so they are not lost to follow-up and treatment. (PR-1, PR-2, PR-4)
- ✓ HIV/AIDS. Although the number of HIV/AIDS cases is not high for Salem County, it is important for both healthcare providers and patients to understand the increased risk. Cancer information should be added to HIV/AIDS literature to educate the community at large and to include these materials in the school systems. The best way to control HIV/AIDS cancer is to prevent HIV/AIDS. Educational information should be available for all citizens, with special attention to the highest risk groups.
- ✓ **Bladder Cancer.** Although bladder cancer numbers are low, education about bladder cancer can be easily incorporated into other activities of the Salem County Cancer Coalition. New or existing materials should add bladder cancer as a risk, focusing on the signs and symptoms. These materials should be available at health clinics.

Recommendations for Statewide Priorities

Local and state recommendations are closely connected. Although some issues may be county specific, most are consistent with statewide concerns. The following issues are a priority:

✓ The New Jersey Cancer Education and Early Detection (NJCEED) program represents an important initial step in providing services for the uninsured and underinsured. However, the program works under a number of constraints. Colorectal and prostate cancer screening is provided under NJCEED, but no funds are available for treatment if cancer is diagnosed. The County NJCEED Project Coordinator must identify facilities to provide free services for affected individuals. If breast or cervical cancer is diagnosed, the patient may qualify for Medicaid for treatment. Such Medicaid eligibility should be extended to

- treatment for NJCEED colorectal and prostate cancer patients as well. No programs, other than charity care, support the uninsured or underinsured for lung and oral cancer, or for melanoma. The NJCEED program is still not widely known despite having been initiated in 1997. Education about the services and programs is essential for both citizens and professionals. A statewide media campaign could increase this awareness.
- ✓ The uninsured and underinsured populations need options through which to obtain affordable health insurance. A state-funded program could fully or partially support insurance at a reduced rate for people with low incomes, perhaps in concert with private health insurance companies. Another option is a program to insure only serious illness, with local clinics providing primary care. Additional facilities/clinics are needed to specifically serve those without health insurance. These are only a few of the options that would assist the uninsured and working poor and reduce reliance on costly charity care, especially for advanced cancers.
- ✓ Much of this report has focused on the uninsured, underinsured, and poor populations. However, it is clear that many affluent people are also unaware of the importance of cancer screening. This may be a result of a lack of information, misunderstanding, cultural issues, or simply busy lifestyles. Using schools to reinforce the message can be of significant assistance in addressing the entire population. Therefore, it is recommended that teaching about cancer should be specifically mandated, probably in high school health classes. All students should exit high school with a clear understanding of cancer screening, the risks of their health behaviors, and the signs and symptoms of a variety of cancers.
- ✓ Cancer outreach and educational information is also important for the adult population. Most outreach projects are local, but state assistance would be helpful. Statewide marketing plans that counties could adopt would reduce redundancy in the efforts. Designated funds for outreach are necessary. Statewide media packages airing on television and radio across the state would be more cost efficient.
- ✓ The New Jersey Behavioral Risk Factor Survey should be expanded to increase the number of people per county surveyed, providing a sufficient database for each county. Additional questions about cancer screening and public knowledge should be included.

Closing Remarks

The Cancer Capacity and Needs Assessment provides a detailed baseline assessment for Salem County. The data, interpretations, and recommendations in this report were developed to provide a wide array of public health and medical personnel with standardized information and detailed analyses that can help guide and focus their efforts at the county level, including such local health initiatives as the forthcoming Community Health Improvement Plans. The reports from all of the counties will collectively inform the continuing comprehensive cancer control efforts of the Office of Cancer Control and Prevention of the New Jersey Department of Health and Senior Services; the Governor's Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey; and the University of Medicine and Dentistry of New Jersey.

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